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Formation of cage phosphonate via hydrolysis of 2-(--methyl-2-phenyl-2H-1,2,3-diazaphosphol---yl)-1,5-dioxo-4-trifluorome-hyl-4-ethoxycarbonylbenzo[f]-1,3,2-dioxaphosphepine

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Abstract

© 2016, Pleiades Publishing, Ltd.A new approach to obtaining of caged bicyclic phosphonate, 4-hydroxy-3-trifluoromethyl-3-ethoxycarbonyl-8-(1-phenylhydrazonoethyl)-5,6-benzo-2,7,1-dioxaphosphabicyclo[3.2.11.5]octane, based on hydrolysis of 2,5-dioxobenzo[f]1,3,--dioxaphosphepine derivative bearing 5-methyl-2-phenyl-2H-1,2,3-diazaphosphol-4-yl substituent at the phosphorus was developed. The hydrolysis process includes elimination of P(II) atom and intramolecular cyclization involving endocyclic carbonyl group of the phosphepine. Structure of the caged phosphonate was established by NMR and XRD methods.

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Keywords

caged phosphonate, diazaphosphol, dioxaphosphepin, P–C bond hydrolysis